American River Basin: Downtown Combined Sewer Upsizing Project

Attachment 10: Costs and Benefits Summary

The Downtown Combined Sewer Upsizing Project has both quantifiable and non-quantifiable benefits. Attachments 7, 8, and 9 detail the flood damage reduction, water supply, and water quality and other benefits, respectively. This attachment provides a summary of the costs and benefits relating to this project.

The total capital cost for the Downtown Combined Sewer Upsizing Project is $13,109,359; however $6,776,064 of the total project costs occurred in previous years. Because these are "sunk costs," they are not used in calculating the net present value of all costs associated with this project. The total present value cost of the project is $5,335,325, and together, this project has a cumulative quantitative benefit of $13,216,844. This is equivalent to an overall benefit-cost ratio of 2.48.

It is important to note that the quantitative analyses do not reflect all the benefits provided by this project. As documented in Attachments 7, 8, and 9, this project possesses numerous benefits for which monetary values cannot easily be assigned. These qualitative benefits are reviewed in the following section. The overall quantifiable benefits of this proposal are summarized in Table 20, Proposal Project Costs and Benefits Summary, at the end of this attachment.

Qualitative Water Supply Benefits

- The Downtown Combined Sewer Upsizing Project is a stormwater flood management project, and due to its nature (combined sewer flows), does not provide any significant water supply benefits. However, the Project will reduce the amount of raw sewage released to the downtown Sacramento area and the adjacent Sacramento River. The Freeport Regional Water Authority's (FRWA) intake structure, located three miles downstream of downtown Sacramento on the Sacramento River, has the potential to be impacted by increased pollutant loading to the river upstream of the intake. In essence, any combined sewer overflows occurring in the City and entering the river has direct significant negative impacts on the river's water quality and therefore affects water entering the FRWA intake structure. This project will ameliorate this problem and will therefore provide water supply reliability benefits.

Qualitative Water Quality

- The Sacramento River is an important source of water for the ecology of the Sacramento-San Joaquin River Delta and for a number of downstream water suppliers, including suppliers downstream of downtown Sacramento. Currently, large storms cause combined sewer outflows into the Sacramento River, resulting in significant water quality impacts to the river. Reductions in combined sewer outflows will help protect water quality for these water suppliers, the Sacramento River ecosystems and the Delta.

Other Expected Benefits

- By reducing the volume and frequency of combined sewage outflows in the downtown Sacramento area, this project will help prevent public contact (directly and/or indirectly) with pathogens potentially present in raw sewage. The downtown Sacramento area is an economically vital area and heavily populated, so protecting public health is a significant motivation for the project.

Table 20 - Proposal Project Costs and Benefits Summary
Proposal: American River Region IRWM Proposition 1E Grant Proposal
Project: Downtown Combined Sewer Upsizing Project
Agency: City of Sacramento

Project	Agency	Total Present Value Project Costs	Total Present Value Project Benefits				B/C Ratio
			Water Supply	Flood Damage Reduction	Water Quality and Other	Total	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
						(d) + (e) + (f)	(g) / (c)
Downtown Combined Sewer Upsizing Project	City of Sacramento	$5,335,325	$0	$9,803,508	$3,413,336	$13,216,844	2.48